

MANUFACTURE OF BIPOLAR TRANSISTOR

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Abstract of JP61240680

PURPOSE: To obtain a high-speed and highly integrated bipolar transistor, by providing a collector contact region and a collector region in insulation layer adhered onto a substrate.

CONSTITUTION: A layer 11 is buried in a semiconductor substrate 1 and then an insulation layer 2 is adhered thereonto.

Apertures 3A and 3B are formed in the portion of the insulation layer 2 located on the buried layer 11. First semiconductor layers 5A and 5B are deposited within the apertures 3A and 3B. Single crystal second semiconductor layers 6A and 6B are deposited on the single crystal semiconductor layers 5A and 5B while polycrystalline semiconductor layers 6C are deposited on the other region, so that the whole surface of the substrate is covered therewith. The semiconductor layer 5A and the semiconductor layer 6A are doped with an impurity to form a collector contact region, the polycrystalline semiconductor layer 6C is doped with an impurity to form a base contact region, and the semiconductor layer 6B is doped with an impurity to form a base region 6BB and an emitter region 6BE. Thus, a bipolar transistor is obtained.

